

Earth Science

Activity 16: Write an Opinion Essay

Topic 32: The Atmosphere!

General Instructions:

- Use a computer to complete your essay/document.
- Write a “five-part” 250-400 word essay in a single 40-minute session.
- Include an introduction, three key supporting paragraphs, and a conclusion.
- Correct spelling, punctuation, and grammar errors prior to completing work.
- Submit or share your final document with your instructor.

Suggestions and Tips:

1. Read the background and context provided to familiarize yourself with the subject area.
2. Select either A or B as the basis for your thesis.
3. Plan the essay prior to writing it.
4. Make the essay organized. Avoid placing multiple points in one paragraph.
5. Use only Times New Roman font 12 with double-spacing to format your document.
6. Discuss only one perspective in each of the body paragraphs.
7. Conclude with a summary.
8. In the summary, rephrase the introduction and thesis. Emphasize key supporting rationale.

Background and Context:

Earth is the only planet in the solar system with an atmosphere that can sustain life. The blanket of gases not only contains the air that we breathe but also protects us from the blasts of heat and radiation emanating from the sun. It warms the planet by day and cools it at night.¹

Earth's atmosphere is about 300 miles thick. But, most of the atmosphere is within 10 miles of the surface. Air pressure decreases with higher altitude. At high altitudes, there is also less oxygen to breathe.

- **The troposphere** is the layer closest to Earth's surface. About 10 miles thick, it contains half of Earth's atmosphere. Most of the water vapor and dust in our atmosphere are in this layer. This layer is where clouds form.
- **The stratosphere** is the second layer. This layer begins above the troposphere. It reaches about 30 miles above Earth's surface. This is where ozone is abundant. Ozone helps sun heat the atmosphere. Ozone also helps absorb harmful radiation from the sun.

Position A: Atmospheric scientists and the general public should be most concerned about the troposphere.

Position B: Atmospheric scientists and the general public should be most concerned about the stratosphere.

¹ Sharp, T. (October 2017). "*Earth's Atmosphere: Composition, Climate & Weather.*" Retrieved from <https://www.space.com>.